Lessons learned and resources for facilitating online learning…

First and foremost, I want to express my highest admiration for everyone immersed in the challenges of moving online in this difficult and unprecedented time. Ed Tech and IT departments, centers for distance and distributed learning, commercial enterprises, and many others across the nation are taking extraordinary steps to provide much needed support and services to help educators make the difficult transition to online learning. I strongly encourage faculty to utilize these valuable resources to continue doing what's best for students.

I would also like to offer my help. Here are some of the most important lessons I've learned and a few resources that I've compiled over the past 20+ years to help educators, designers, and administrators establish online courses and degree programs… I hope you find something useful.

Lesson 1. The use of interactive technology does not ensure that meaningful interactions will occur. If you are using online discussion boards or videoconferencing technology, such as Zoom or SKYPE, you may find a summary of effective questioning techniques to help stimulate meaningful dialog.

Lesson 2. Meaningful interactions must be carefully planned as an integral part of e-learning. Good instructors clarify expectations, provide meaningful feedback, tell stories, and stimulate many other interactions in class to engage learning and facilitate learning, but they do so intuitively based on verbal and non-verbal cues. These interactions often disappear when faculty move online, and must be carefully planned and sequenced as an integral part of online learning. Consider using published instructional strategies, grounded in research and theory, to design meaningful online interactions.

Lesson 3. Technology enhances productivity but does not necessarily increase quality. Back in the 1980s, desktop publishing enabled many to produce flyers, newsletters, and handouts. However, the quality of such materials varied because few had the professional training necessary to design high-quality layouts. Learning management systems, such as Blackboard and Moodle act in similar fashion. They increase access to educational opportunities, but not necessarily the quality of the learning experience. Adopting guidelines, such as the Quality Standards for Online Learning, may reduce variance and ensure the quality of online coursework over time. Instructional design (ID) principles may also be used to set standards and reduce variance to promote quality.

Lesson 4. Constraints create opportunities: Part I. The need to move online may give you the opportunity to reflect on your teaching practices and examine how online educators move into and out of traditional teacher-directed, to more active, learner-centered approaches.

Lesson 5. Constraints create opportunities: Part II. The need to move online may inspire you to think out of the box, and create new (or look into existing boxes with new purpose). Consider applying Keller's (2010) ARCS Model of Motivational Design to measure and evaluate students' reactions to instruction, and enhance student engagement.

Lesson 6. Constraints create opportunities: Part III. The need to move online may inspire you to think out of the box, and either create new boxes (or look into existing boxes with new purpose). Consider four domains of evidence to (a) help determine the source, and the validity and reliability of the evidence; and (b) advance efforts to ground the design of coursework on research and theory, and facilitate evidenced-based educational practices.

Lesson 7. Constraints create opportunities: Part IV. The need to move online may also give you a chance to reflect on and refine your coursework by improving the alignment of your objectives, assessments, and instructional strategy. Curriculum alignment is the hallmark of high quality training and education. Systematic instructional design (ID) models help ensure alignment of the fundamental instructional elements by using the outputs of one design task to inform subsequent design tasks, but the application of such systematic processes also take time and expertise.

Lessons 8. Whether explicit or implicit, **your beliefs about how and why people learn, and what educators should do to facilitate such learning direct your behaviors**. To make informed design decisions, develop a deep and broad understanding of learning theories and ID principles, and continue to refine an explicit educational philosophy that is grounded in learning research and theory.

Lesson 9. What you do before and after the use of advanced technologies, such as simulations, educational games, and online learning platforms, **is just as important as the technology itself.** Explicit and deliberate strategies for integrating technology are essential for students' acceptance and learning. Factors such as when and how technology is introduced into the curriculum, the perceived relevance of related content and activities, and the nature and scope of both related and competing curriculum resources all affect the use of technology and the impact they have on student learning.

Lesson 10. Moving online is an evolutionary process that has its ups and downs. Different people, need different resources, at different times to optimize online learning. At first, you may focus on learning how to use technology to put existing resources and assignments online, and to facilitate online discussions and assessments. With time, you may find that you need and/or want to transform your coursework and educational practices. Whatever the case may be, as you move to online learning, it is important to remember that a dip in performance is a normal part of any learning experience. Take heart and persist, and consider six secrets for facilitating change (Fullan, 2008).

Thanks again to all of you who are contributing your time and resources to address the unprecedented physical and mental challenges triggered by COVID-19. If you have any questions or comments, or if there is anything I can do to elaborate on the resources, or otherwise help students continue with their education, please let me know.

Until then, stay safe and be well,

2c

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Biography

Dr. Atsusi "2c" Hirumi is a Professor of Instructional Design and Technology. He currently holds a joint appointment with the Dept. of Learning Sciences in the College of Community Innovation and Education, and the Dept. of Medical Education in the College of Medicine at the University of Central Florida.

For the past 25 years, Dr. Hirumi has centered his teaching, research and service on the design of online and hybrid learning environments. He has worked with faculty, staff, students and administrators in K12 and higher education, medical centers, and the military across North and South America, Asia, and the Middle East to establish, evaluate, and continuously improve high quality online and hybrid training, and educational programs. Dr. Hirumi's research now focuses on advancing medical education and fostering transdisciplinary collaboration among instructional designers and educators in the health professions to promote health and well-being by facilitating evidence-based education, training, and professional development.

Dr. Hirumi has published 35 refereed articles, 16 book chapters, edited 4 books and has made over 150 presentations at international conferences, including keynote addresses in the US, Canada, Brazil, Iran, and Mexico. Awards include: The David H. Jonassen Excellence in Research Award presented by the Association for Educational Communication and Technology for long-term record of excellence in research and impact in instructional design and technology; the AERA Studying and Self-Regulated Learning SIG Poster Award; the Army Training Maverick Award for leadership in distance learning; the Texas Distance Learning Association Award for commitment to excellence and innovation, the UHCL Star Faculty Award, the Phi Delta Kappa Outstanding Practitioner Award, and the ENRON Award for Innovation. He is also the only two-time winner of the WebCT Exemplary Online Course Award.

Related Publications

Refereed Journal Articles

1. **Hirumi, A.**, Johnson, K., Kleinsmith, A., Reyes, R., Rivera-Gutierrez, D., Kubovec, S., Bogert, K., Lok, B., & Cendan, J. (2017). Advancing virtual patient simulations and experiential learning with InterPLAY: Examining how theory informs design and design informs theory. *Journal of Applied Instructional Design*, 6(1), 49-65. doi.org/10.289990/jaid2017.061005.
2. **Hirumi, A.**, Johnson, T., Reyes, R., Johnson, K., Rivera-Gutierrez, D., Kleinsmith, A., Kubovec, S., Eakins, M., Bogert, K., Lok, B., & Cendan, J. (2016). Advancing virtual patient simulations through design research and Inter*PLAY*: Part II – testing and integration. *Educational Technology, Research and Development*, *64*(6), 1301-1335. doi:10.1007/s11423-016-9461-6.
3. **Hirumi, A.**, Kleinsmith, A., Johnson, K., Kubovec, S., Eakins, M., Bogert, K., Rivera-Gutierrez, D., Reyes, R., Lok, B., & Cendan, J. (2016). Advancing virtual patient simulations through design research and Inter*PLAY*: Part I – design and development. *Educational Technology, Research & Development*, *64*(4):763–785. doi:10.1007/s11423-016-9429-6.
4. **Hirumi, A.** (2013). Three levels of planned e-learning interactions: A framework for grounding research and the design of e-learning programs. *Quarterly Review of Distance Education, 14*(1), 1-16.
5. **Hirumi, A.**, Sivo, S., & Pounds, K. (2012). Telling stories to enhance teaching and learning: The systematic design, development and testing of two online courses. *International Journal on E-Learning*, *11*(2), 55-81.
6. **Hirumi, A.**, Bradford, G., & Rutherford, L. (2011). Selecting delivery systems and media to facilitate blended learning: A systematic process based on skill level, content stability, cost and instructional strategy. *Journal for Online Learning and Teaching*. *7*(4), 489-501.

7. Chen, B., **Hirumi, A.**, & Zhang, N. J. (2007). Investigating the use of advance organizers as an instructional strategy for web-based distance education. *Quarterly Review of Distance Education, 8*(3), 223-232.
8. **Hirumi, A.** (2005). In search for quality: A review of distance education guidelines and industry standards. *Quarterly Review of Distance Education, 6*(4), 309-330.
9. **Hirumi, A.** (2003). Get a life: Six tactics for reducing time spent online. *Computers in Schools*, *20*(3), 73-101.
10. **Hirumi, A.** (2002). A framework for analyzing, designing and sequencing planned e-learning interactions. *Quarterly Review of Distance Education, 3*(2), 141-160.
11. **Hirumi, A.** (2002). The design and sequencing of e-learning interactions: A grounded approach. *International Journal on E-Learning, 1*(1), 19-27.
12. **Hirumi, A.** (2000). Chronicling the challenges of Web-basing a degree program: A systems perspective. *The Quarterly Review of Distance Education, 1*(2), 89-108.
13. Bermudez, A.B. & **Hirumi, A.** (2000). Examining the effectiveness of systematically designed web-based instruction. *Interactive Learning Environments, 8*(2), 1-12.
14. **Hirumi, A.**, & Bermudez, A. (1996). Interactivity, distance education, & instructional systems design converge on the super information highway. *Journal of Research on Computing in Education, 24*(1), 1-16.
15. Harmon, S. W., & **Hirumi, A.** (1996). A systemic approach to the integration of interactive distance learning into education and training. *Journal of Education for Business. 71*(5) 267-71.

Edited Books

1. **Hirumi, A.** (Ed.) (2014). *Grounded Designs for Online and Hybrid Learning: Practical Guidelines for Educators and Instructional Designers. Book I – Design Fundamentals.* Eugene, WA: International Society for Technology in Education.
2. **Hirumi, A.** (Ed.) (2014). *Grounded Designs for Online and Hybrid Learning: Practical Guidelines for Educators and Instructional Designers. Book II – Designs in Action.* Eugene, WA: International Society for Technology in Education.
3. **Hirumi, A.** (Ed.) (2014). *Grounded Designs for Online and Hybrid Learning: Practical Guidelines for Educators and Instructional Designers. Book III – Trends and Technology.* Eugene, WA: International Society for Technology in Education.

Book Chapters

1. **Hirumi, A.,** Lok, B., Johnson, T., Johnson, K., Rivera-Gutierrez, D., Ramsamooj, R., ...Cendan, J. (2018). Nerve, interplay, and design-based research: Advancing experiential learning and the design of virtual patient simulations. In J. M. Spector, B. B. Lockee, and M. D. Childress (Eds). *Learning, Design, and Technology: An Interactional Compendium of Theory, Research, Practice, and Policy*. New York, NY: Springer.
2. Colson, R., & **Hirumi, A.** (2016). A framework for the design of online competency-based education (CBE) to promote student engagement. In K. Rasmussen, P. Northrup, & R. Colson (Eds.). *Handbook of Research on Competency-Based Education in University Settings* (pp. 168-185). Hershey, PA: IGI Global.
3. **Hirumi, A.** (2014). Aligning learning objectives and learner assessments: An essential precursor for design. In A. Hirumi (Ed.). *Grounded Designs for Online and Hybrid Learning: Practical Guidelines for Educators and Instructional Designers* (pp. 9-42)*.* Eugene, WA: International Society for Technology in Education.
4. **Hirumi, A.** (2014). Applying grounded strategies to design and sequence e-learning interactions. In A. Hirumi (Ed.). *Grounded Designs for Online and Hybrid Learning: Practical Guidelines for Educators and Instructional Designers* (pp. 43-76)*.* Eugene, WA: International Society for Technology in Education.
5. **Hirumi, A.**, & Kidney, G. (2010). Contemporary Issues Facing Distance Educators: An eLearning Perspective. In G. Anglin (ed.). *Instructional Technology: Past, Present and Future* (3rd ed.) (pp. 145-160). Santa Barbara, CA: ABC-CLIO publishing.